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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/626,908	07/25/2003	Hiroyuki Otaki	CU-5972	2412

26530 7590 01/14/2008  
LADAS & PARRY LLP  
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CHICAGO, IL 60604

EXAMINER
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ANGEBRANNDT, MARTIN J

ART UNIT	PAPER NUMBER
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1795

MAIL DATE	DELIVERY MODE
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01/14/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/626,908	OTAKI ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Martin J. Angebrannt	1795	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 11/01/2007.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,2 and 7-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2 and 7-14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

1. The response of the applicant has been read and given careful consideration. Responses to the arguments are presented after the first rejection to which they are directed.

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1,2 and 7-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Otaki et al. '521, in view of Killey '672.

Otaki et al. '521 teach a holographic transfer foil comprising a substrate, a holographic film having a breaking strain of 0.1-3% at 25 degrees C and 0.1-5% at 130 degrees C and an adhesive layer. The breaking strain of the holographic layer is preferably 0.1-1% at 25 degrees C and 0.1-1.5% at 130 degrees C [0035]. The use of a release/delaminating layer applied to the substrate is disclosed and this layer may be 0.1- 2 microns in thickness [0106-0107]. Useful materials for the heat sensitive adhesive layer are disclosed. [0102-103]. A barrier layer may be present between the release layer and the holographic layer to prevent migration of low molecular weight compounds from the release layer into the hologram layer [0111-1112]. Useful components for the holographic recording layer are disclosed and the holographic layer includes fine particles to impart a fragility to the holographic layer. [0038-0045, 0048-0092].

In the sample prepared for evaluation [0132+], a PET film was coated to 10 microns with the holographic composition, and had a breaking strain of 1.5 % at 25 degree C (table 1), the release

layer was coated to a thickness of 1 microns on a support and the heat sensitive adhesive layer (EC1200) was coated to a thickness of 2 microns [0133-0142]. The types of particles include inorganic materials and various resin particles having sizes of 100-600 nm (0.1 to 0.6 microns) in amounts of 1-30% and serve to improve the foil cutting properties of the holographic layer. Materials for these including high density polyethylene, fluorinated resins, (meth)acrylic resins, polycarbonate, epoxy resins, urethane polymers and the like [0039-0045].

Killey '672 teaches that conventionally holographic transfer foils use hot seal adhesive compositions containing filler or pigments to aid in the disruption of the adhesive layer upon transfer to yield edges with clean breaks and well defined images. The use of ~10% of particles (1 part to 9 parts resin or 1 part in 10 parts total) is specifically disclosed. (8/56-9/23)

It would have been obvious to one skilled in the art to modify the cited example of Otaki et al. '521 by adding particles, such as the resin particles described at [0042-0044] to the adhesive layer in an amount of 1 parts for every 10 parts of the adhesive composition as taught by Killey '672 with a reasonable expectation of improving the image definition, further one of ordinary skill would have found it obvious to one skilled in the art to optimize the amount of particles to have both the adhesive layer and the holographic layer break at the same place to produce well defined images and to use such particles as disclosed as useful in imparting the same fragility in the hologram layer to perform the same function in the adhesive layer.

With respect to the argued limitation added to claim 1, this is new matter, but in view of the teachings of the desirability of improving the breaking/ foil cutting properties in Otaki et al. '521 and Killey '672 would have been obvious as it would clearly be a move away from these teachings to have the adhesive and holographic layers break in different places and so

minimizing the differences in elongation and break strength between these two layers would be a matter of routine optimization. With respect to the arguments relating to the resin particles, the examiner notes that the high density polyethylene, fluorinated resins, (meth)acrylic resins, polycarbonate, epoxy resins, urethane polymers and the like listed by Otaki et al. '521 are also listed by the applicant at [0059-0060]. Further any of the organic resin materials will inherently fluoresce in the UV. The issue of functionalization of the surface and adding a colorant is not commensurate in scope with the coverage sought as these are unrecited features. Further inorganic materials can be surface functionalized (particularly silica) and colored with additives. The rejection stands.

The applicant argues that the reference is not prior art. The examiner disagrees noting that the applicant has not perfected priority by providing a certified translation of the priority document. When that is of record, this rejection would be withdrawn.

4. Claims 8,10,12 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Morii et al. '378, in view of Killey '672.

Morii et al. '378 teach laminates such as that of figures 6b, 10a, which comprise a protective layer (7), an adhesive layer (5"), a hologram layer (6), a second adhesive layer (5') and a removable substrate (see illustrative example 4, col. 27-28). The laminate of figure 10b, which comprise a protective layer (7), an adhesive layer (5"), a hologram layer (6), a second adhesive layer (5'), a reflective layer (9) a third adhesive layer (5) and a removable substrate (11). Useful volume holographic recording materials are disclosed as including a matrix polymer, a photopolymerizable compound, a photopolymerization initiator and a sensitizing dye. (12/28-16/35, particularly 12/32-39). The hologram is stabilized during a monomer migration step via

heating and therefore the matrix polymer must allow monomer migration (15/57-60). Useful adhesive layer materials include acrylic, acetate, gelatin, casein, polyvinyl acetate and hot melt resins. (12/7-27 and 33/49-65). The addition of particles to the holographic layer to render the holographic layer more brittle is disclosed. These particles include fluorescent dyed polymer particles. (41/1-42) The surface of the surface protective layer (7) may be provided with a release layer and a rigid film initially adhered to it and then peeled from it. (18/33-52). Morii et al. '378 teaches the use of various particles in the holographic layer including inorganic and resin based particles with sizes in the 1- 100 nm range in amounts of 10-100 parts to 100 parts of the holographic recording material to impart fragility to the hologram layer. (40/65-42/14). The fluorescent particles add another layer of security. (41/43-47). The use of a fragile/brittle layer is also disclosed. (46/12-35)

It would have been obvious to one skilled in the art to modify the cited example of Morii et al. '378 by adding particles, such as the fluorescent resin particles described at (41/1-42) to the adhesive layer in an amount of 1 part for every 10 parts of the adhesive composition as taught by Killey '672 with a reasonable expectation of improving the image definition, further one of ordinary skill would have found it obvious to one skilled in the art to optimize the amount of particles to have both the adhesive layer and the holographic layer break at the same place to produce well defined images and to use such particles as disclosed as useful in imparting the same fragility in the hologram layer to perform the same function in the adhesive layer.

5. Claims 1,2 and 7-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shioda et al. EP 1022625, in view of Killey '672 and Morii et al. '378.

Shioda et al. EP 1022625 teach a holographic transfer foil comprising a substrate, a holographic film having a breaking strain of 0.5-15% at 25 degrees C and 0.5-30% at 120 degrees C and an adhesive layer. The breaking strain of the holographic layer is preferably 1-10% at 25 degrees C and 1-15% at 120 degrees C [0065]. The use of a release layer applied to the substrate is disclosed and this layer may be 0.1- 2 microns in thickness [0070]. Useful materials for the heat sensitive adhesive layer are disclosed. [0069]. A barrier layer may be present between the release layer and the holographic layer to prevent migration of low molecular weight compounds from the release layer into the hologram layer [0075]. Useful components for the holographic recording layer are disclosed. [0094-0117, 0127-0153]. In example A3 [0180+], a PET film was coated to 3 g/m<sup>2</sup> with the holographic composition, and had a breaking strain of 6 % at 25 degree C, the release layer was coated to a weight of 1 g/m<sup>2</sup> on a support and the heat sensitive adhesive layer (AD-1790-15) was coated to 3 g/m<sup>2</sup>.

It would have been obvious to one skilled in the art to modify the cited example of Shioda et al. EP 1022625 by adding particles, such as the fluorescent resin particles described at (41/1-42) of Morii et al. '378 to the adhesive layer in an amount of 10 parts for every part of the adhesive composition as taught by Killey '672 with a reasonable expectation of improving the image definition, further one of ordinary skill would have found it obvious to one skilled in the art to optimize the amount of particles to have both the adhesive layer and the holographic layer break at the same place to produce well defined images

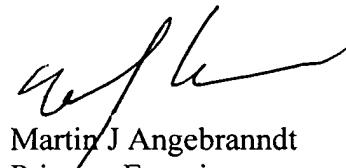
6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Martin J. Angebrannndt whose telephone number is 571-272-1378. The examiner can normally be reached on Monday-Friday.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Huff can be reached on 571-272-1385. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Martin J Angebranndt  
Primary Examiner  
Art Unit 1795

1/10/2008